

Issue 47, October 20, 2000  
**Special Edition: Strategic Facility Services P/L**

Asset Management in the New Century **161**  
 Preparing the maintenance Contract for your asset **164**  
 An Innovative Approach to Risk in Asset Management **166**

## Directions for a New Century

Ami Sudjiman-Spinks

### Thank you

My thanks for all your good wishes for a speedy recovery.

Penny

In the meantime please continue to enjoy our special season of

### Guest Issues

This issue has been specially prepared by

### Strategic Facility Services P/L

For more information on the services provided by SFS, please turn to the back page.

Asset Management in recent years has become more critical than ever before, as organisations are required to be more accountable for their performance and establishing their future directions. And the performance of many organisations need to be fully supported by the performance and management of their assets, as non performing assets may indirectly show inefficiencies of the organisation. The performance of the asset, however, can only be appreciated when they are linked directly to the business objectives and operations of the organisation.

On the other hand, assets need to be effectively managed and maintained to ensure that they continue to function efficiently, and be fully supportive of the organisations' operational requirements. It is always a debate whether to outsource the maintenance tasks for the asset, or to let in house resources do the tasks. The decision, however, depends again, on the criticality and importance of the maintenance tasks and their outcomes, in directly supporting the organisations operational needs. Thorough discussions within organisations need to take place so that important issues can be resolved internally, and the criticality of some of the maintenance delivery tasks can be identified and agreed upon.

Finally, why do we have to manage and maintain the asset at all? The central issue is the management of risks. By carefully managing the asset, asset managers can become more aware of the risks associated with their asset. Through careful planning, strategically using life cycle analysis, establishing their maintenance and operations planning, they will be able to manage the risks accordingly. The use of specialised decision support tools to assist them in managing these risks will also be beneficial in highlighting the issues to

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### The final quarter of the last century marked the following issues for Australia:

- Shift of economic policies and government de-regulations in Australia
- Construction booms in major Australian Cities, first with the Commonwealth Games, the America's Cup and later the Olympic Games
- Changes in wages structure, taxation rules and compulsory superannuation
- Privatization of government agencies and sale of government commodities
- Re-structuring of organisations, with more emphasis to 'core business' and outsourcing of non-core activities.

### These Changes Continue to Apply

All of the above issues, particularly privatisation of government organisations may continue whilst government continues searching for the most cost effective method of doing their business. This goes hand in hand with general organisational re-structuring and trends to outsource various sectors in many organisations across the world. The indications to-date are that decisions to outsource or privatize certain sectors of an organisation are based strictly on identification of core businesses and the cost benefit of outsourcing the non-core activities.

Besides financial viability, the trend to retain only those resources which directly support their operation will continue to the first decade of the new century. These resources include financial supports, human resources, intellectual property/ corporate knowledge and general asset. However, many organisations have difficulties finding the direct linkage between their assets and their business objectives.

### Finding the direct link between assets and business objectives

Finding this direct linkage is essential before making any decisions on the assets, particularly when trying to determine whether to sell or retain them. Hence it is essential to examine each of the assets based, at least, on the following parameter:

- The business activities currently associated with the assets
- The exact dollar value that these activities contribute to the business operation
- How each asset is currently supporting these activities
- The suitability of each of these assets to support the activities
- The general condition of these assets

### Watch those Head Office Assets!

It is often found that the asset supporting the Head Office or general administration part of an organisation in fact contributes the least contribution to the business operation, or has the least direct support to the business. In the mean time, the metal garage at the rear of the compound may store the most important goods and equipment that the organisation relies on to conduct their business.

### ...and impact on Assets of Restructuring.

The other issue with the change of organisational re-structuring is the formation of different or new Centres, with re-defined objectives and different method of operation. The assets associated with these 'organisational divorce settlement' are often simply passed down to the respective users' agency without the supporting background information and documentation. The assets in these cases are treated just as part of the 'property settlement' process, with little effort to clarify their linkage to the new objectives or charta.

In some cases, the assets were the results of the last series of construction booms in major cities of Australia, particularly from the late 70's. This means that many of these assets will be between 20-30 years old by the first decade of the new century. For many assets, this age range represents a critical time for renewal or recycling. For many asset managers and owners, the first decade of the century will subsequently become a period where important decisions will have to be made, such as:

### Choices

- **Sell** the asset that does not have direct link to the business objectives
- **Refurbish** it to maintain the organisation's productivity level
- **Demolish** it and create a new asset, or
- **Recycle** it for different uses or meet different objectives which may bring greater returns.

It is then essential that any refurbishment of buildings be carried out with the strategic plans of the organisation in mind. This means that various equipment items may end up being totally replaced with a complete new set, rather than individually selecting the equipment and replacing them to match the existing.

### Asset Management Plan

An asset management plan that directly relates to the business objectives of the organisation can also be used as a master plan or general accommodation guideline for the organisation, which also needs to be acknowledged by the organisation's management in general. Too often, temporary buildings are erected to meet a short-term accommodation need, resulting in a campus of aging but well fitted metal garages and portable cabins in between half occupied high rise buildings. This is usually the product of different sections within the organisation placing individual requests for additional space for their area, without any asset management guidelines, awareness of a master plan or reference to the general strategic plans of the organisation.

Similarly, some other organisations inherit an aging high rise building, with its services and fitout having been modified and altered in a band-aid fashion over the years. One can almost read the history of the organisation when assessing the reasons some of the modifications were carried out, which may include a complete turn around of work practices and business objectives within two decades.

### Strategic Asset Planning

The key to all of the above issues is strategic planning and management at all sectors of organisations, which include its asset management. Once the strategic asset

management framework is defined within its context of the business operation, risk management to the future of these assets can be applied, tactical decisions to implement these strategic plans can be made, followed by sensible operational management.

Conducting asset management strategic planning within the organisation's overall strategic planning will ensure that all decisions relating to the assets are taken within the framework of the business and that all other aspects within the business, eg human resources, training, marketing, etc are taken into consideration. *One still remembers the construction of a new typing pool for an organisation in the mid 70's, when the new trend then was multi-skilling and introducing the 'typists' into the general work area.*

### Continuous Reviews

Strategic plans need to be continually updated and reviewed to suit the ever changing environment and planning parameters. New government regulations, global market and the performance of the business influence the direction of the organisation, and the way supporting assets need to be managed.

Hence the direct linkage between the assets and the business objectives also needs to be continually monitored. Part of this review may also include the review of future needs of new assets, so that appropriate funding and other associated tasks can be planned ahead. No new assets should be acquired, and no modifications to asset should be implemented, without assessing them against the larger planning framework and their direct linkage to the business objectives.

As continual re-structuring and out-sourcing will occur early in this new century, it is essential that similar approach to re-structuring and out-sourcing be adopted in asset management. Continual monitoring of the links between the assets and the organisation's business objectives will become essential in establishing any asset management framework for all organisations. Such assessment of the linkage will also be come important when the assets are the results of the construction boom of the mid 70's. Any decisions made on these aging assets will need to reflect the current and future objectives of the organisation. ❖

## Strategic Decisions Behind Practical Asset Management: Preparing the Maintenance Contract for your Assets

Peter Bull

When planning to outsource the maintenance contract for your assets, there are a few things organisations should consider before proceeding to tender(s) or even before engaging consultants to help arranging for one. Many of these issues first need to be discussed, argued and finally agreed within the organisation. Different organisations will have different objectives, and hence different requirements and outcomes for maintenance. So, there is no formula for preparing a maintenance contract that can be used across all organisations. The following are the top 10 main tasks with their associated issues that organisations will need to include when considering outsourcing their maintenance tasks. Remember that a thorough preparation before calling tenders will guarantee smooth contract administration during the implementation of the actual contract.

### 1 Establish Clear Parameters

- 1.1 Define Objectives and Outcomes required
  - Why outsource the maintenance tasks?
  - Identify its gains and benefits of outsourcing it
  - Identify any disadvantages
- 1.2 Define scope of Work
  - What the maintenance service provider is to include in their proposal and why
  - Responsibility for New Work and their design input.
- 1.3 Define Roles and Responsibilities
  - Contractor delegation and responsibilities in support of your business objectives.
- 1.4 Define Options to achieve Outcomes
  - In-house delivery (Full or Partial)
  - Management Contract
  - Risk Sharing
  - Comprehensive Contract
- 1.5 Establish Probity Considerations
  - Extent of conformity and their Parameters

### 2 Establish Type of Relationships

- 2.1 Assess the type of Contractual relationship required, eg Fixed fee contract, Performance contract; Fully Comprehensive; Do and charge, or; use Sub-contractor or Consultant Delegation.
- 2.2 Assess Appropriate Type of Business Relationships, eg Partnering; Direct supplier and purchaser; and Site presence/ availability on site.
- 2.3 Identify Method of Assessing Their Performance
  - KPI related to organisation's business objectives
  - Auditing Process
- 2.4 Assess optimum risk allocation
  - All risks transferred;
  - If Partially transferred; which ones.

### 2.5 Assess Type of Maintenance Contractor Required

- Large company –with in house resources
- Large company with Subcontract Labour;
- Small Operators;
- Consulting Firm managing maintenance, or
- Contract person under direct supervision.

### 3 Establish General Conditions of Contract

- 3.1 Determine optimum duration of contract
  - Length of contract and extension option;
  - Non performance option;
  - Termination options.
- 3.2 Specify Details of the Transition period
  - Length of transition period
  - Change over requirements
  - How to manage the Incumbent Contractor immediately after notification
  - Similarly with the Incoming Contractor
- 3.3 Establish Financial Arrangement
  - Accounting System and preferred method of payment.
  - Trust Account.
- 3.4 Establish Reporting Mechanisms
  - Monthly management meeting.
  - Regular reporting requirements.
  - Alignment with other reports prepared within your business.
- 3.5 Establish the hours of operation
  - Seven days or five days per week.
  - 24 hour service.
  - Emergency response.
- 3.6 Establish type of maintenance required
  - Performance based maintenance.
  - Fixed Time Scheduled Maintenance.

- Preventive Maintenance.
  - Break Down Maintenance; or
  - Combination.
- 3.7 Risk sharing maintenance contract**
- Level of risk to be managed
  - Impact on Business
  - Ownership by Contractor
  - Incentives
  - Methodology
- 3.8 What to do with works outside preventive maintenance tasks eg Urgent Minor Requests and Minor New Works;**
- 3.9 Establish the need for long term maintenance and programming**
- Long term replacement / refurbishment programme.
  - Use of Condition Appraisals;
- 3.10 Establish Maintenance Delivery Issues**
- Access, Security, Appearance, Behaviour
  - Level of Service, Service Interruption and Noise tolerance
- 4 Develop Tender Process and Evaluation Criteria**
- 4.1 Establish Tender process**
- Select Tender or Public Tender
  - Invitation to Register and Request for Tender.
- 4.2 Establish Evaluation process**
- 4.3 Establish Selection Criteria for the Maintenance Tasks**
- Familiarity with type of sites.
  - Proven capability and capacity etc
  - Sample Maintenance Plan
- 5 Maintenance Specification Development**
- 5.1 Establish adequacy of available information for specification preparation**
- Equipment Register
  - Business Objectives
  - Recent Maintenance & Repair Data
  - Access to Documentation
  - Performance Criteria
- 5.2 Set Basic Objectives**
- Identification of Critical Assets.
  - Business Objectives for each asset.
  - Condition levels or operational performance requirements for each asset
- 5.3 Set Plant And Equipment Performance Levels**
- Business priority
  - Required Performance level.

- Criticality of the plant and equipment within the asset portfolio.

#### **5.4 Preparation Of Maintenance Specification**

### **6 Prepare the Contract conditions for the Maintenance Contract**

#### **6.1 Compilation Of Conditions Of Maintenance Contract, including:**

- Confirmation of issues previously discussed
- Contract conditions
- Legal input.
- Review process.

#### **6.2 Prepare Tender Procedures, including:**

- Collate all tender documents and specification
- Tender Lists
- Pre Tender Estimate
- Advertisements
- Prepare and record Addenda (if required)

### **7 Maintenance Tender process**

#### **7.1 Call Tenders**

- Either through ITR process or select tender
- Advertise/ invite, despatch documents, issue addenda
- Assist tenderers to inspect site and attend to tender queries

### **8 Tender Evaluation Process**

- Technical Evaluation
- Financial Evaluation
- Interview And Referee Checks
- Report Of Recommendations
- Tender Negotiations
- Approval
- Sign Contract

### **9 Maintenance Contract Transition Management**

- Establish operational tasks to be protected throughout the transition period
- Manage both contractors
- Assist the incoming contractor.
- Assist the incumbent contractor to finalise their affairs in a responsible manner.

### **10 Audit of the Maintenance Service Delivery**

Identify method and frequency of the audit process.

# An Innovative Approach to Risk in Asset Management

Graeme Lowe

## Asset Management – a Business Imperative

Property owners and managers face significant challenges as they strive to optimise the benefits from their capital investment and operational use of their facilities. Maintenance plays a significant role in the achievement of these outcomes over the life of the facility and therefore needs to be carefully planned and managed. The visible aspects of maintenance are a multitude of individual activities and outcomes however if maintenance is to make an effective contribution to the overall objectives of property use and ownership it must be considered in the context of the strategic plan for the facility.

The five principal activities in asset management are shown arranged around a circle to underline the cyclic and interdependent nature of the activities. Each activity relies on one or more of the other activities and it is therefore necessary to revisit issues as more information becomes available or circumstances change.



The central issue in all these activities is the management of risk and this is highlighted in the diagram. The first step towards effective risk management is the same as the first step towards good asset management - clarity of desired outcomes.

The analysis of failure mechanisms and the methods available to prevent or predict them enables cost effective implementation of strategies which will deliver acceptable outcomes in relation to the objectives users and owners have for the facility.

**The asset manager is fundamentally a risk manager with cost constraints.**

The achievement of successful asset management depends on the extent to which the tasks are integrated with the overall management processes of the organisation. Asset management is not a peripheral task; it must be driven by fundamental business needs and recognised as part of mainstream decision making within the organisation.

## 1. Strategic Planning

The first step towards effective asset management is to have clear, measurable and agreed outcomes both for day to day operational activities and the long-term investment objectives. Strategic Planning is a process to identify and define these desired outcomes. The two key stakeholders for a facility are the owner and the user (tenant) with each having their own objectives.

The user generally seeks

- High facilities availability
- Minimum disruption to operations
- Safe working environment
- Efficient response to problems

The owner generally seeks

- Optimal return on investment
- Long term financial commitment from users
- Low operational costs for
  - energy
  - maintenance
  - cleaning
  - refurbishment
- Continuing asset integrity and hence value

Performance requirements expressed in terms of functional outcomes relating to the user or owner's objectives are fundamental to effective asset management. They must also allow determination of priorities when funds are limited (as they always are).

## 2. Life Cycle Planning

Life Cycle Planning looks at the big picture of maintenance - the life cycle of all the elements, which combine to form a fully functional facility. Analyses of the elemental life cycles identify what needs to be done and when, and the risks of not taking timely action. A rational financial plan evolves and provides for periodic flow of funds over the anticipated life of the element in accordance with the business plan.

In short, Life Cycle Planning provides a sound financial plan for managing the provision of capital works and maintenance for a facility over an extended planning period of typically 10 to 15 years.

## 3. Maintenance Planning

The life cycle planning process has a particular focus on the long-term issues however there is also a need to carefully design a detailed maintenance plan to deal with day to day operational issues.

The first stage in the development of a detailed plan is the translation of the business objectives of the user (and owner) into a strategy for the development of the plan. Establishing a clear and strong link between business objectives and desired maintenance outcomes ensures resources are correctly targeted and costs are kept to a minimum.

Effective maintenance requires a detailed plan in order that the delivery process can be managed. Large and complex facilities required a large number of individual maintenance tasks to be undertaken over the course of a year. The management of the tasks and the associated resources generally requires the use of a computerised maintenance management system. Such a system also facilitates the recording and analysis of feed back data collected in the field.

There are a wide variety of maintenance management systems on the market but their effectiveness depends on having a good maintenance plan and the skill to utilise the chosen system to cost effectively deliver the desired maintenance outcomes.

## 4. Operations Planning

Careful consideration of the process of day to day operation of a facility ensures that these activities are targeted with actions designed to achieve the strategic objectives.

Support services required by modern buildings such as operating plant and equipment, execution of maintenance work, cleaning, house keeping and security can be delivered in a variety of ways. An organisation can employ its own skilled resources and manage the tasks themselves, they can contract out all or some of the tasks or they can engage a single organisation to take responsibility for the delivery of an integrated service. Choice in any particular case depends on the expertise available in an organisation, its focus on core activities and the appropriate allocation of risk.

Energy consumption is generally a major cost driver in the operation of a facility. Excess energy consumption is also undesirable in the broader environmental context.

There is now considerable interest in and understanding of occupational health and safety issues in modern buildings. The closed environment occupied for a significant part of each day by the same people potentially exposes them to both short and long-term health risks. Identification of relevant criteria for the "environmental health" of a building enables preventive and corrective action to be undertaken. In some jurisdictions there are mandatory requirements which must be met.

## 5. Decision Tools and Information Systems

The quantity of historical and operational data associated with a modern facility poses a challenge in information management. Inevitably trade-offs are required between the cost of data collection and the potential benefit of having the data readily available. Careful evaluation of the benefits, which flow from the availability of a piece of data and an honest assessment of the costs of collection and maintenance of the data, minimises the risk of any investment in information management systems.

Information supports both operational and strategic decision making processes. The application of specialised decision support tools can significantly enhance management performance by delivering information in a structured and accessible format which can be easily understood and utilised. ❖

# Strategic decision support

## .... fad or good business sense?

If you find it difficult to demonstrate the impact that your portfolio strategy will have on your organisation's business you are not alone

Asset managers are being pressed to respond to short term priorities to deliver increased profits with minimal spending on longer-term activities. This reality is diametrically opposed to the principles of good facility management.

Value can be defined as the ratio between benefits and cost. However, what represents the best value strategy for your business today and into the future is a question that can seem just too complex to answer.

In the long term value equation, cost (price) is a concrete variable that's instantly (if not correctly) quantifiable. Benefits are more difficult to predict.

As one asset management consultant puts it, "Price is simply the key to the safe, but the value lies in the contents of the safe."

To help you capture the value in your safe, Strategic Facility Services has developed risk management analysis techniques that access the data in your business and tap into generic

'expert' information to create usable, strategic information. You can then make informed and justified decisions....strategic decisions that deliver best value!

SFS would be pleased to discuss the approach, the support tools that are available and their potential for application to your portfolio.

At Strategic Facility Services we take the time to understand your requirements.

That's our commitment to you.

For more information ...

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